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		Application Number 09/577,166 (Patent No. 6,730,442)		
TRANSMITTAL	-	Filing Date	May 24, 2000 (Issue Date 5/4/04)	
FORM		First Named Inventor	Richard L. SUTHERLAND, et al.	
		Art Unit	1756	
(to be used for all correspondence after	initial filing)	Examiner Name	Martin J. Angebranndt	
otal Number of Pages in This Submiss		Attorney Docket Number	SAIC0006	
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	Licensing-related Papers		of Appeals and Interferences	
Amendment / Reply	Petition		Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)	
After Final	Petition to Convert to a Provisional Application		Proprietary Information	
Affidavits/declaration(s)	Power of	Attorney, Revocation of Correspondence Address	Status Letter	
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PATENT

DEC O 6 2005 BY DOCKET NO: SAIC0006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re. Patent Application of:

Richard L. SUTHERLAND, et al.

Art Unit:

1756

App. Serial No.:

09/577,166

Examiner:

Martin J. Angebranndt

Patent No.:

6,730,442

Filing date:

May 24, 2000

Issue date:

May 4, 2004

For:

SYSTEM AND METHOD FOR REPLICATING VOLUME

HOLOGRAMS

REQUEST FOR CERTIFICATE OF CORRECTION

U.S. Patent and Trademark Office Customer Service Window Attn: Certificate of Correction Branch Randolph Building 401 Dulany Street Alexandria, VA 22314

Sir:

The undersigned requests that a Certificate of Correction be issued for the above-identified patent as indicated on the attached Form PTO/SB/44 (04-05).

This request is being made in order to correct errors in the "References Cited (56)" Section.

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overpayment, to Deposit Account No. 501458. A duplicate copy of this letter is submitted herewith for that purpose.

Respectfully submitted,

Date:

KILPATRICK STOCKTON LLP 607 14th Street, N.W., Suite 900 Washington, D.C. 20005 Telephone: (202) 508-5800

• , ,

By:

George T. Marcou Registration No. 33,014

36609/193865 WSHLIB01:215697

PATENT

DEC 0 5 2005 BOOKET NO: SAIC0006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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DEC 7 2005

PATENT NO: 6,730,442

Page 1 of 5

APPLICATION NO.: 09/577,166 ISSUE DATE: May 4, 2004

INVENTOR(S): Richard L. SUTHERLAND, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

UNDER REFERENCES CITED (56) - Foreign Patent Documents -

GB 2 292 745	3/6/96	Merck Patent GmbH	C09K / 19/44	
DE 44 08 746 A1	9/21/95	Medolas Ges Fuer Medizintechni	A61B / 17/36	
EP 0 672 386 A1	9/20/95	Surgical Systems & Instruments, Inc.	A61B / 17/22	
WO 95/17127	6/29/95	Rygaard, Jorgen	A61B / 17/11	
GB 2 281 566	3/8/95	Merck Patent GmbH	C09K / 19/30	
JP 6-190185	4/27/94	Zanussi Elettrodomestici (IT)	D06F / 39/12	
WO 94/04958	3/3/94	Merck Patent GmbH	G02F / 1/1333	
EP 0 422 689 A2	4/17/91	Mountpelier Investments, S.A.	A61M / 25/00	
SU 1635966	3/23/91	Sverdiovsk G Med. Inst.	A61B / 17/00	
GB 2 222 696	3/14/90	Exitech Ltd.	G03H / 1/04	
WO 89/06264	7/13/89	Hughes Aircraft Company	C09K / 19/00	
WO 81/00668	3/19/81	Jansen, Anton	A61B / 17/11	
CA 544591	8/6/57	National Research Development Corp.		

UNDER REFERENCES CITED (56) - Other Publications -

Please add:

International Search Report for Application No. PCT/US97/12577, dated January 14, 1998 (mailing date)

Written Opinion for Application No. PCT/US97/12577, dated April 28, 1998 (mailing date)

Preliminary Examination Report for Application No. PCT/US97/12577, dated September 3, 1998 (mailing date)

European Search Report for Application No. EP 97 93 7988, dated October 13, 1999

International Search Report for Application No. PCT/US00/34661, dated July 17, 2001

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Page <u>2</u> of <u>5</u>

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ISSUE DATE: May 4, 2004

INVENTOR(S): Richard L. SUTHERLAND, et al.

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UNDER REFERENCES CITED (56) - Other Publications -

Please add:

International Search Report for Application No. PCT/US01/40691, dated September 5, 2001 (mailing date)

International Search Report dated September 5, 2001

International Preliminary Examination Report for Application No. PCT/US00/34661, dated February 20, 2002

Written Opinion for Application No. PCT/US01/40691, dated May 15, 2002 (mailing date)

Preliminary Examination Report for Application No. PCT/US01/40691, dated September 10, 2002 (mailing date)

- R. T. Pogue, et al., "Monomer Functionality Effects in the Anisotropic Phase Separation of Liquid Crystals," Polymer 41, pp. 733-741, 2000
- M. Escuti, et al., "5.3: A Model of the Fast-Switching Polymer-Stabilized IPS Configuration," SID International Symposium, Digest of Technical Papers, First Edition, pp. 32-35, May, 1999
- C. C. Bowley, et al., "45.3: Electro-Optic Investigations of H-PDLCS: The Effect of Monomer Functionality on Display Performance," SID International Symposium, Digest of Technical Papers, First Edition, pp. 958-961, May, 1999
- C. C. Bowley, et al., "Advances in Holographic Polymer Dispersed Liquid Crystal Technology," in Liquid Crystal—Materials and Devices, Mat. Res. Soc. Symposium Proceedings, Vol. 559, pp. 97-107, 1999
- C. C. Bowley, et al., "Morphology of Holographically-Formed Polymer Dispersed Liquid Crystals (H-PDLC)," Mol. Cryst. Liq. Cryst., Vol. 331, pp. 209-216, 1999

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UNDER REFERENCES CITED (56) - Other Publications -

Please add:

M. Date, et al., "Full-Color Reflective Display Device Using Holographically Fabricated Polymer-Dispersed Liquid Crystal (HPDLC)," Journal of the Society for Information Display (SID), Vol. 7, pp. 17-22, 1999

J. A. Firehammer, et al., "Lasing Pixels: A New Application for Polymer Dispersed Liquid Crystals (PDLCs)," Mol. Cryst. Liq. Cryst., Vol. 331, pp. 165-172, 1999

Seferis, James C., "Refractive Indices of Polymers," Polymer Handbook, 4th Edition, John Wiley & Sons, Inc., pp. 571-582, Copyright 1999

Richard L. Sutherland, et al., "Switchable Holograms for Displays and Other Applications," SPIE Proceedings, Vol. 3421, pp. 8-18, June, 1998

- L. V. Natarajan, et al., "Holographic PDLCs for Optical Beam Modulation, Deflection, and Dynamic Filter Applications," SPIE Proceedings, Vol. 3292, pp. 44-51, January 28-29,1998
- L. V. Natarajan, et al., "Electrically Switchable Holograms Containing Novel PDLC Structures," SPIE Proceedings, Vol. 3143, pp. 182-190, July 28-29,1997
- N. M. Lawandy, et al., "L1.3: Lasing Pixel PDLC Light Valves for Projection Applications," SID International Symposium, Digest of Technical Papers, First Edition, pp. 1001-1004, May, 1997
- G. P. Crawford, et al., "Reflective Color LCDs Based on H-PDLC and PSCT Technologies," Journal of the Society for Information Display, Vol. 5, No. 1, pp. 45-48, 1997
- D. Schwarze-Haller and F. Noack, "Nuclear Magnetic Resonance Field-Cycling Proton Relaxation Study of Polymer Dispersed Liquid Crystals," J. Chem. Phys., Vol. 105, No. 11, pp. 4823-4832, September, 1996

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UNDER REFERENCES CITED (56) - Other Publications -

Please add:

Lawrence H. Domash, et al., "Switchable-Focus Lenses in Holographic Polymer Dispersed Liquid Crystal," SPIE, Vol. 2689, pp. 188-194, May, 1996

Richard L. Sutherland, et al., "The Physics of Photopolymer-Liquid Crystal Composite Holographic Gratings," SPIE Proceedings, Vol. 2689, pp. 158-169, May, 1996

R. L. Sutherland, et al., "Switchable Bragg Gratings Formed in situ Within a Polymer-Dispersed Liquid Crystal Composite Medium," Materials Research Society Symp. Proc., Vol. 425, pp. 331-341, April 8-11, 1996

Timothy J. Bunning, et al., "The Effects of Eliminating the Chain Extender and Varying the Grating Periodicity on the Morphology of Holographically Written Bragg Gratings," SPIE Proceedings, Vol. 2651, pp. 44-54, January 31 – February 1, 1996

- T. J. Bunning, et al., "Morphology of Reflection Holograms Formed in situ Using Polymer-Dispersed Liquid Crystals," Polymer, Vol. 37, No. 14, pp. 3147-3150, 1996
- G. S. Iannacchione, et al., "Deuterium NMR and Morphology Study of Polymer-Dispersed Liquid-Crystal Bragg Gratings," Europhysics Letters, Vol. 36, No. 6, pp. 425-430, 1996

Richard L. Sutherland, et al., "Analysis of Periodic Polymer-Dispersed Liquid Crystal Structures for Dynamic Hologram Applications," SPIE Proceedings, Vol. 2532, pp. 309-318, July 10-12, 1995

- N. Kawatsuki and H. Ono, "Electro-Optical Properties of Polymer/(Liquid Crystal) Composite Film Fabricated by Two-Step Phase Separation Method," Chemistry Letters, No. 5, pp. 333-334, 1995
- R. L. Sutherland, et al., "Electrically Switchable Volume Gratings in Polymer-Dispersed Liquid Crystals," Appl. Phys. Lett., Vol. 64, No. 9, pp. 1074-1076, February 28, 1994

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UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 6,730,442

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UNDER REFERENCES CITED (56) - Other Publications -

Please add:

K. Tanaka, et al., "Holographically Formed Liquid-Crystal/Polymer Device for Reflective Color Display," Journal of the Society for Information Display, Vol. 2, No. 1, pp. 37-38, 1994

L. Domash, et al., "Programmable Beamlet Generator, Dynamic Lens, and Optical Memory Using Electrically Switched Holographic Devices," SPIE Proceedings, Vol. 2026, pp. 642-652, November, 1993

Hideya Murai, et al., "Electro-Optic Properties for Liquid Crystal Phase Gratings," SPIE Proceedings, Vol. 1665, pp. 230-239, February 11-13, 1992

Lawrence H. Domash, "Applications of Dynamic Holograms for Quasi-Volume Storage," SPIE Proceedings, Very Large Optical Memories-Materials and System Architectures, Vol. 1773, 5 pp., 1992

Richard T. Ingwall and Timothy Adams, "Hologram: Liquid Crystal Composites, SPIE Proceedings, Vol. 1555, pp. 279-290, July 24-25, 1991

A. M. Lackner, et al., "Droplet Size Control in Polymer Dispersed Liquid Crystal Films," SPIE Proceedings, Vol. 1080, pp. 53-61, January 17-18, 1989

Hori, Asai, and Fukai, "Field-Controllable Liquid-Crystal Phase Grating," IEEE, Vol. ED-16, p. 1734 (4 pp.), 1979

R. A. Kashnow and J. E. Bigelow, "Diffraction From a Liquid Crystal Phase Grating," Applied Optics, Vol. 12, No. 10, pp. 2302-2304, October, 1973

Stoke, Funkhouser, Leonard, Indebetoew, and Zech, "Hand-Held Holography," 1 p., September 19, 1966

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